

Tropical Storm Lee 2011 Stream Damages – Tompkins County

Tompkins County Soil and Water Conservation District

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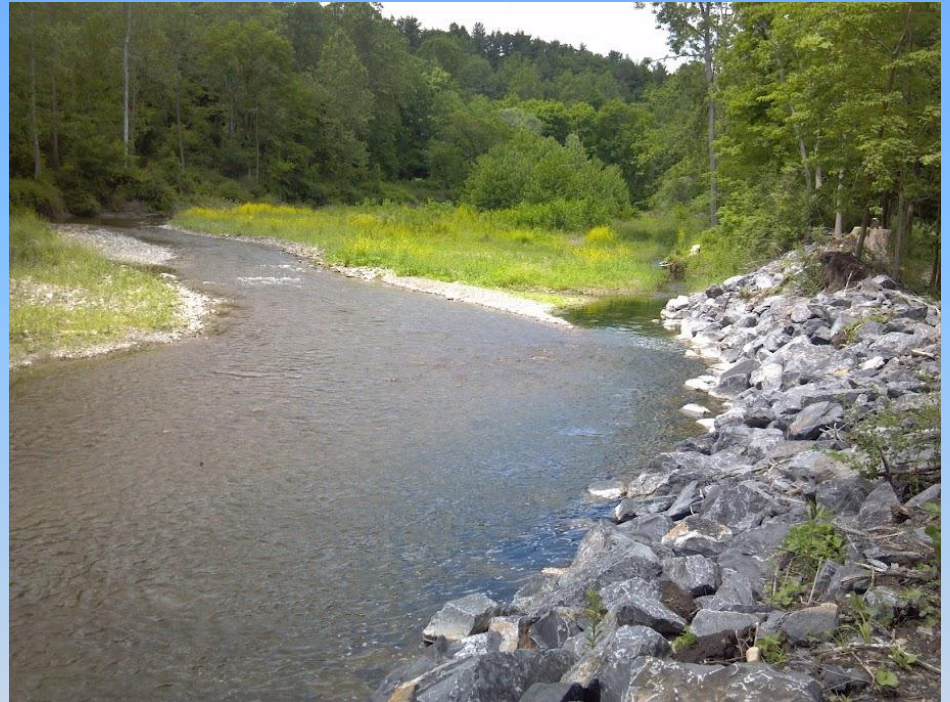
Background information

- Tropical Storm Lee dumped over 6” of rain between September 6-8, 2011, with most of that falling within a 24 hour period on September 8th (4.5”)
- Southern part of the county saw the most rain
- FEMA declared a state of emergency for Tompkins County

Shelter Valley Road Stream Debris



Salmon Creek Road Stream Debris @ Rod & Gun Club



Railroad undermining @ Cayuga Inlet





This part of railroad bed was
taken away by storm flows



600 Road Wall in Town of Caroline



Boice Creek wall behind Caroline Town Barns



Log Jam in Brooktondale



~1800 cubic yards of bank soil loss in September storm. That's equivalent to 120 dump trucks!



Brooktondale Stream Repair



Trees Removed and
floodplain reestablished

Stream reconfigured away
from vulnerable bank

What's needed still?

Floodplain vegetation!!!!



Banks Road



- Half of roadway washed out along Banks Road
- over 80 foot of channel migration in one storm
- FEMA disaster area



Salmon Creek Road Bridge Project with Tompkins County Highway



Jackson Hollow Creek/Vankirk Road (Newfield)



Grade
Control
Structure
stabilizes
bridge from
head-cutting!

New Bottomless Bridge
installed by County Highway
Department

South Street Extension in Trumansburg



What we are ultimately trying to strive for!



How we currently take care of our streams

- Varied and splintered efforts by multiple agencies.

– Example:

Tompkins County Planning – Flood Hazard Mitigation Program, easements, buffers, grant writing, etc.

Tompkins County SWCD – Grant Writing, Technical Assistance, riparian plantings, water quality monitoring, survey & design, biological monitoring, management planning, etc.

Highway Departments – stream maintenance, infrastructure crossings, monitoring at bridge sites, EQUIPMENT & LABOR!

Federal Departments (USGS, NRCS, USFWS) – All of the above with a lot more money available.

Towns and City – local codes and laws, management planning, citizen coordination(i.e.- Town of Caroline watershed committee), water filtration, sewage treatment

Others – CSI, Trout Unlimited, FLLT, Cornell, Ithaca College, State Parks...



Take Home Messages

- Treat streams as infrastructure transporting soil, water, aquatic organisms, trees/debris, invasive species, stormwater...
- Streams interact with other infrastructure (i.e.- houses, bridges, pipelines, roads, train tracks) and we need to allow it space!

Take Home Messages

- Pre-disaster maintenance is a lot cheaper than post-disaster fixes!
- Putting back what failed without accounting for stream dynamics is a waste of time and money!

Questions!

